Lesson 14: Surds and Operations [PATHS]

Year 10 Mathematics Unit 1 — Block B | Worksheet

Name _____ Date _____ Class _____

Multiple Choice

Q1. Simplify sqrt(50).

A) 5sqrt(2) B) 2sqrt(5) C) 25sqrt(2) D) 10sqrt(5)

Q2. Simplify 3sqrt(5) + 2sqrt(5).

A) 5sqrt(10) B) 6sqrt(5) C) 5sqrt(5) D) 5sqrt(25)

Q3. Rationalise 2 / sqrt(3).

A) 2sqrt(3)/3 B) sqrt(3)/2 C) 2/3 D) 2sqrt(3)

Q4. Which is NOT equal to sqrt(12)?

A) 2sqrt(3) B) sqrt(4) x sqrt(3) C) 3sqrt(2) D) sqrt(24) / sqrt(2)

Q5. A square has area 18 cm^2. What is the exact side length?

A) 3sqrt(2) cm B) 9sqrt(2) cm C) 2sqrt(3) cm D) 4.24 cm

Short Answer

Q6. Simplify sqrt(72) + sqrt(50). *(2 marks)*

Q7. Rationalise 5 / sqrt(5) and simplify your answer fully. *(3 marks)*

Q8. Explain why mathematicians prefer to leave answers in exact surd form rather than using decimal approximations. Use sqrt(2) as an example. *(3 marks)*

Key Formulas

- Write any formulas you need here.